CLAIMS

What is claimed is:

- 1. A thermal management system comprising:
 - a fuel stabilization system;
 - a first liquid-to-liquid heat exchanger system in fluid fuel communication with said fuel stabilization system, said first liquid-to-liquid heat exchanger operable at a first maximum temperature; and
 - a second liquid-to-liquid heat exchanger system in fluid fuel communication with said first liquid-to-liquid heat exchanger, said second liquid-to-liquid heat exchanger operable at a second maximum temperature, said second maximum temperature greater than said first maximum temperature.
- 2. The thermal management system as recited in claim 1, wherein said fuel stabilization system comprises a deoxygenation system.
- 3. The thermal management system as recited in claim 1, further comprising a fuel pump in fluid fuel communication with said first liquid-to-liquid heat exchanger and said second liquid-to-liquid heat exchanger, said fuel pump between said first and said second liquid-to-liquid heat exchangers.
- 4. The thermal management system as recited in claim 1, wherein said first liquid-to-liquid heat exchanger and said second liquid-to-liquid heat exchanger are fuel-to-oil heat exchangers.
- 5. The thermal management system as recited in claim 1, wherein said second liquid-to-liquid heat exchanger utilizes an ester-based oil.

- 6. The thermal management system as recited in claim 5, wherein said ester-based oil operates above 325 degrees Fahrenheit.
- 7. The thermal management system as recited in claim 1, wherein said first maximum temperature does not exceed approximately 325 degrees Fahrenheit.
- 8. The thermal management system as recited in claim 1, wherein said first liquid-to-liquid heat exchanger is in fluid communication with a fan gear oil system of a fan geared gas turbine engine.
- 9. The thermal management system as recited in claim 1, wherein said second liquid-to-liquid heat exchanger is in fluid communication with a gas turbine engine oil system.
- 10. The thermal management system as recited in claim 9, wherein said second liquid-to-liquid heat exchanger utilizes an oil which operates in excess of approximately 325 degrees Fahrenheit.

- 11. A method of thermal management for a gas turbine engine comprising the steps of:
 - (1) deoxygenating a fuel to provide a deoxygenated fuel;
 - (2) communicating the fuel through a first liquid-to-liquid heat exchanger system operable at a first maximum temperature;
 - (3) communicating the deoxygenated fuel through a second liquid-to-liquid heat exchanger system operable at a second maximum temperature, said second maximum temperature greater than said first maximum temperature.
- 12. A method as recited in claim 11, wherein said step (2) further comprises the step of:

communicating the deoxygenated fuel and an oil through the first liquid-to-liquid heat exchanger, the oil effective above approximately 325 degrees Fahrenheit.

13. A method as recited in claim 11, wherein said step (2) further comprises the step of:

communicating the deoxygenated fuel and an oil through the first liquid-to-liquid heat exchanger and preventing the oil from exceeding approximately 325 degrees Fahrenheit.

- 14. A method as recited in claim 13, further comprises the step of:
 communicating the oil through an oil loop in communication with a subsystem which
 can not exceed approximately 325 degrees Fahrenheit.
- 15. A method as recited in claim 11, wherein said step (3) further comprises the step of:

communicating the deoxygenated fuel and an oil through the second liquid-to-liquid heat exchanger, the oil effective above approximately 325 degrees Fahrenheit.

16. A method as recited in claim 11, wherein said step (3) further comprises the step of:

communicating the deoxygenated fuel and an oil through the second liquid-to-liquid heat exchanger and permitting the deoxygenated fuel to exceed 325 degrees Fahrenheit.

- 17. A method as recited in claim 11, wherein said step (1) occurs prior to said step (2).
 - 18. A method as recited in claim 11, further comprises the step of: communicating the deoxygenated fuel through a fuel pump after said step (2).
- 19. A method as recited in claim 11, further comprises the step of: communicating the deoxygenated fuel from the first liquid-to-liquid heat exchanger to the second liquid-to-liquid heat exchanger.